

Amendments In the Claims

Please cancel Claims 1-55. Please add Claims 56-87.

1-55. Canceled.

56. (New) A computer-implemented method comprising:
associating an item with a class, wherein
the class comprises associated attributes that describe members of the
class, and
said associating the item comprises selecting the class such that each
associated attribute has a non-null value in describing the item;
storing a first record associating the item with the selected class; and
storing a second record associating the item with each associated attribute of the
class and a value of the attribute describing the item.

57. (New) The computer-implemented method of Claim 56 wherein said
selecting the class further comprises:
selecting the class from a class hierarchy, wherein the class hierarchy comprises
child classes and associated parent classes, and
a child class inherits each attribute of the associated parent class.

58. (New) The computer-implemented method of Claim 57 wherein the
associated attributes of a child class further comprise an additional set of attributes not
inherited from the associated parent class.

59. (New) The computer-implemented method of Claim 58 wherein said
selecting the class further comprises:
determining a class in the hierarchy that has associated attributes necessary to
describing the item.

60. (New) The computer-implemented method of Claim 56, wherein

said storing the first record is to a first memory structure, and
said storing the second record is to a second memory structure.

61. (New) The computer-implemented method of Claim 60 wherein the first and second memory structures are distinct from one another.

62. (New) The computer-implemented method of Claim 60 wherein the first and second memory structures are tables in a database.

63. (New) The computer-implemented method of Claim 56 wherein the associated attributes are metadata of the class.

64. (New) An apparatus comprising:
means for associating an item with a class, wherein
the class comprises associated attributes that describe members of the
class, and
said means for associating the item comprises means for selecting the
class such that each associated attribute has a non-null value in
describing the item;
means for storing a first record associating the item with the selected class; and
means for storing a second record associating the item with each associated
attribute of the class and a value of the attribute describing the item.

65. (New) The apparatus of Claim 64 wherein said means for selecting the class further comprises:

means for selecting the class from a class hierarchy, wherein the class hierarchy
comprises
child classes and associated parent classes, and
a child class inherits each attribute of the associated parent class.

66. (New) The apparatus of Claim 65 wherein the associated attributes of a child class further comprise an additional set of attributes not inherited from the associated parent class.

67. (New) The apparatus of Claim 66 wherein said means for selecting the class further comprises:

means for determining a class in the hierarchy that has associated attributes necessary to describing the item.

68. (New) The apparatus of Claim 64 further comprising:
a first and a second memory structure, wherein
said means for storing the first record performs said storing to the first
memory structure, and
said means for storing the second record performs said storing to the
second memory structure.

69. (New) The apparatus of Claim 68 wherein the first and second memory structures are distinct from one another.

70. (New) The apparatus of Claim 68 wherein the first and second memory structures are tables in a database.

71. (New) The apparatus of Claim 64 wherein the associated attributes are metadata of the class.

72. (New) A system comprising:
a processor;
a memory, coupled to the processor, storing instructions executable on the
processor to
associate an item with a class, wherein
the class comprises associated attributes that describe members of
the class, and

the instructions to associate the item further comprise instructions to select the class such that each associated attribute has a non-null value in describing the item;
store a first record associating the item with the selected class; and
store a second record associating the item with each associated attribute of the class and a value of the attribute describing the item.

73. (New) The system of Claim 72 wherein the instructions to select the class further comprise instructions executable on the processor to:

select the class from a class hierarchy, wherein the class hierarchy comprises child classes and associated parent classes, and a child class inherits each attribute of the associated parent class.

74. (New) The system of Claim 73 wherein the associated attributes of a child class further comprise an additional set of attributes not inherited from the associated parent class.

75. (New) The system of Claim 74 wherein the instructions to selecting the class further comprise instructions executable on the processor to:

determine a class in the hierarchy that has associated attributes necessary to describing the item.

76. (New) The system of Claim 72 further comprising:
a first and a second memory structure;
the instructions to store the first record perform the storing to the first memory structure, and
the instructions to store the second record perform the storing to the second memory structure.

77. (New) The system of Claim 76 wherein the first and second memory structures are distinct from one another.

78. (New) The system of Claim 76 wherein the first and second memory structures are tables in a database.

79. (New) The system of Claim 72 wherein the associated attributes are metadata of the class.

80. (New) A computer-readable storage medium comprising:

- a first set of instructions, executable on a processor, configured to associate an item with a class, wherein
 - the class comprises associated attributes that describe members of the class, and
 - said first set of instructions further comprises a second set of instructions, executable on the processor, configured to select the class such that each associated attribute has a non-null value in describing the item;
- a third set of instructions, executable on the processor, configured to store a first record associating the item with the selected class; and
- a fourth set of instructions, executable on the processor, configured to store a second record associating the item with each associated attribute of the class and a value of the attribute describing the item.

81. (New) The computer-readable storage medium of Claim 80 wherein the second set of instructions further comprises:

- a fifth set of instructions, executable on the processor, configured to select the class from a class hierarchy, wherein the class hierarchy comprises child classes and associated parent classes, and
 - a child class inherits each attribute of the associated parent class.

82. (New) The computer-readable storage medium of Claim 81 wherein the associated attributes of a child class further comprise an additional set of attributes not inherited from the associated parent class.

83. (New) The computer-readable storage medium of Claim 82 wherein the fifth set of instructions further comprises:

a sixth set of instructions, executable on the processor, configured to determine a class in the hierarchy that has associated attributes necessary to describing the item.

84. (New) The computer-readable storage medium of Claim 80, wherein the third set of instructions is further configured to perform said storing the first record to a first memory structure, and
the fourth set of instructions is further configured to perform said storing the second record to a second memory structure.

85. (New) The computer-readable storage medium of Claim 84 wherein the first and second memory structures are distinct from one another.

86. (New) The computer-readable storage medium of Claim 84 wherein the first and second memory structures are tables in a database.

87. (New) The computer-readable storage medium of Claim 80 wherein the associated attributes are metadata of the class.